



TOWN OF ARLINGTON  
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Engineering Division

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## **STORMWATER MANAGEMENT STANDARDS**

The following document is intended to assist applicants and their consultants by providing Stormwater Management/Mitigation design guidelines, submission requirements, and review procedures in accordance with The Town of Arlington Bylaw Title V, Article 15, Section 5, as well as the Rules and Regulations promulgated pursuant to Section 6.C. of the aforementioned Bylaw. This document shall be considered supplemental information and does not release the applicant and their consultants from complying with all requirements of the aforementioned Bylaw and Rules and Regulations.

Stormwater Management is required for all projects that will increase impervious area at a site by 350-sf or more, as well as select other cases outlined in the Rules & Regulations. Stormwater Management projects shall require the application of either a Minor or Major Stormwater Management Permit. Minor Stormwater Management Permits shall typically be required for any project increasing impervious area by 350 to 999-sf provided the project does not require a Building Permit. Major Stormwater Management Permits shall be required for all projects increasing impervious area by 350-sf or more and which do not qualify for a Minor Permit (i.e. building permit required). Projects proposing the use of pervious pavers, pervious asphalt, or other pervious materials to offset an increase in impervious area shall be subject to either a Minor or Major Stormwater Management Permit as detailed in the Rules & Regulations. Permit fees shall accompany all permit applications in the amount of \$100 for a Minor Permit Application and \$300 for a Major Permit Application.

### **Minor Stormwater Management Permit**

The design and function of the stormwater drainage system for a Minor Stormwater Management Permit shall conform to the following requirements, which may be modified by the Town of Arlington in a case-by-case situation to better suit the problems and specific needs of a particular site. Further details pertaining to these requirements can be found in Appendix B of the Rules & Regulations:

1. All projects subject to a Minor Stormwater Management Permit shall be designed to meet the minimum storage requirements presented in the following table:

<b>Increase in Impervious Area (s.f.)</b>	<b>Minimum Storage Required (gal.)</b>
350 to 450	440
451 to 550	540
551 to 650	640
651 to 750	730
751 to 850	830
851 to 950	930
950 to 999	980

2. All projects must consider, and unless infeasible, propose and implement Low Impact Development BMPs listed in the Massachusetts Stormwater Handbook.

3. All projects must include sufficient sediment and erosion controls through the duration of the project.

All projects to which the above referenced Minor Stormwater Management Permit applies, shall submit to the Engineering Division the following:

1. The Name, property address, project description, site plan, O&M plan, and Phone Number and Email of the Property Owner, Land Developer, and/or the Engineer or Consultant working on the Project.
2. Site Plan shall be prepared by drafting of hand sketching and at a minimum include:
  - a. Existing conditions, including structures and site grading
  - b. Propose conditions, including structures, proposed BMPs, and site grading
  - c. Topographic lines at approximate 2-ft intervals
  - d. Erosion and sedimentation controls
  - e. Appropriate BMP details

#### Major Stormwater Management Permit

The design and function of the stormwater drainage system for a Major Stormwater Management Permit shall conform to the following requirements, which may be modified by the Town of Arlington in a case-by-case situation to better suit the problems and specific needs of a particular site. Further details pertaining to these requirements can be found in Appendix B of the Rules & Regulations:

1. All projects subject to this Bylaw must meet the standards of the most current Massachusetts Department of Environmental Protection (DEP) Stormwater Management Policy and any applicable Bylaws and/or Rules and Regulations of the Town of Arlington.
2. No project shall result in an increase in the peak rate of stormwater runoff or volume over natural and existing conditions for the 2-, 10-, and 25-Year 24-hour duration storm events.
3. Technical design and construction standards for detention/retention/infiltration structures, including, but not limited to, groundwater separation, outlet control structures, sediment forebays, spillways, splashpads, as well as sizing for any basins, outlets, and spillways shall be consistent with DEP Stormwater Management Standards.
4. The design for the capacity of all stormwater system pipes and inlet grates shall be based on a Rational Method Analysis (or acceptable equivalent) for a 25-Year Storm intensity.
5. Existing lot grading shall be retained wherever possible to maintain predevelopment drainage patterns to the greatest extent possible. Where grading must be altered, the proposed grading shall not convey additional overland flows across lot lines or cause ponding on any adjacent property.

All projects to which the above referenced Major Stormwater Management Permit applies, shall submit to the Engineering Division a Grading & Drainage Report and/or Plan at a minimum scale of 1"=40'. The Plans and/or Report shall consist of and include the following information (if applicable):

3. The Name, Mailing Address, Phone Number, and Email of the Property Owner, Land Developer, and the Engineer or Consultant working on the Project.
4. Delineation of:
  - a. Federal, State, and/or Local Wetlands.
  - b. The National Flood Insurance Program 100-Year Flood Zone and/or other Risk Areas.
  - c. Any Streams and/or Drainage Ways on or abutting the Site.
  - d. Any Easements or Right-of-Ways on or abutting the Site.
  - e. Extents of the Project or a Limit of Work/Disturbance Area.
5. Existing and proposed contours on the site to indicate general topography. The contour interval shall be at a two-foot interval. Spot elevations shall be included in areas with grades of 2% or less. If permanent benchmarks are required for the proposed activities, those shall also be shown on the Plan.

- a. Approximate existing contour lines that are appropriate for use in certain small-scale projects can be found on the Town of Arlington website at <http://209.6.3.218/GISMaps//index1.htm>.
6. Existing and proposed impervious surfaces shall be clearly delineated and labeled on the plan. Include a summary table of all features, both existing and proposed. An example summary table is shown below:

	Existing (SF)	Proposed (SF)	Alteration
<b>Building Footprint</b>	1,250	1,500	+ 250 SF
<b>Bituminous Driveway</b>	500	650	+ 150 SF
<b>Concrete Walkway</b>	40	30	- 10 SF
<b>Total Impervious</b>	<b>1,790</b>	<b>2,180</b>	<b>+ 390 SF</b>

7. Existing and Proposed locations of all drainage structures, including foundation and roof drains, with rim and invert elevations. Profile and/or Cross Section drawings shall be provided for all proposed infiltration/retention/detention systems.
8. Where stormwater recharge or infiltration is proposed, the plans shall include observed and estimated maximum groundwater elevations at the location of each proposed infiltration/retention/detention area.
  - a. Soil percolation testing or other acceptable soil absorption rate testing should be conducted in the vicinity of any proposed infiltration/retention/detention area.
9. Location and detail of proposed erosion & sediment control measures to be installed and maintained during construction activities.
10. Hydrologic calculations and a summary table showing the pre- and post-development runoff conditions for comparative purposes. Runoff calculations shall be prepared for the 2-, 10-, 25-, and 100-Year storm events for both the Existing and Proposed Conditions. These drainage calculations shall be prepared by utilizing the NRCS TR55 or TR20 Method.
  - a. With a written request from the applicant, and at the full discretion of the Town of Arlington Engineering Division, certain small-scale projects may adequately demonstrate through simple runoff/storage calculations that the proposed stormwater mitigation is appropriate.

#### Conditions and Requirements

Note that upon approval of a Minor or Major Stormwater Management Permit by the Engineering Division, all projects will be subject to following conditions and requirements unless otherwise noted:

1. Approval of the design package will not defer, discharge, or release the Owner's responsibility to construct the stormwater management system as designed, to complete ongoing maintenance of the system, to limit the extents of impervious areas to those presented in the approved package, and to ensure that additional stormwater flows are not directed to abutting properties following construction and installation.
2. During the installation of the stormwater system, the following inspections shall be coordinated with the Engineering Division a minimum of 24-hours in advance of the requested inspection time:
  - a) Bottom of Excavation
  - b) System Installation Prior to Backfill
3. Subsequent to the required inspections, the following shall be submitted to the Engineering Division in order to obtain a ***Stormwater Management Certificate of Completion***:
  - a) ***As-Built Site Plan***, stamped, signed and dated by a Professional Engineer or Land Surveyor licensed in Massachusetts, produced to scale, showing at a minimum the location and dimensions of the installed stormwater management system and associated observation ports, as well as **ALL** impervious areas (buildings, patios, walks, driveways, sheds, etc.) present on the site;
  - b) ***Statement of Compliance***, stamped, signed and dated by the Design Engineer, stating that the stormwater management system and impervious areas were constructed in accordance with the approved design package and meet the requirements set forth in Title V Article 15 of the Town of Arlington Bylaws.
  - c) ***Please note that for Minor Permits ONLY, submissions may be signed and dated by the Applicant, Contractor, and/or their Designee in lieu of a Professional Engineer or Land Surveyor.***

Please note that the Town of Arlington Inspectional Services Department will require receipt of the *Stormwater Management Certificate of Completion* prior to issuing a *Certificate of Occupancy*.